GERD

The typical pain of GERD is **burning retrosternal chest pain** that is worse with **laying flat** or with **spicy foods**. It's common in the **obese**. It improves with **antacids**. This is a medical problem treated first with **Proton Pump Inhibitors** (and lifestyle adjustments). Uncomplicated GERD is treated (and therefore diagnosed) by PPIs only. Only when PPIs fail or there are alarm symptoms is an **EGD** done. **24-hr pH monitoring** is the best test, but rarely done, usually only if surgery is considered. If there are **metaplastic changes** on EGD, treat with **high-dose PPI**. If there are **dysplastic changes** local ablative methods are used. Cancer (adeno) requires resection. A **Nissen Fundoplication** can be used to treat GERD if PPIs are not tolerated or the patient doesn't want them. This is when a 24-hr pH monitor would be performed (before going to surgery)

Path: Weakened LES allows reflux of Gastric Contents
Pt: Burning retrosternal CP worse when laying down, bad taste in the mouth, better with antacids
Dx: No alarm symptoms = PPI
Alarm symptoms = EGD
Best = pH monitoring
Tx: GERD = PPI
Metaplasia/Barrett's/Salmon = High dose PPI
Dysplasia = Local ablation
Cancer = Resection
Doesn't want meds = Nissen

Achalasia

The LES can't **relax**. Food goes down the esophagus and gets "**stuck.**" The patient will learn that food will pass with the aid of gravity (eats upright only). A **barium swallow** reveals a **Bird's Beak Deformity**. While that's often sufficient, a **manometry** (failure to relax) is definitive. Options are dilate with a balloon, relax with botox, or cut the sphincter with a **Heller Myotomy**.

Path: LES too strong, stays contracted
Pt: Food gets stuck
Dx: Barium Swallow, Manometry
Tx: ~~Dilation, Botox~~, Myotomy is best

Cancer

A progressive dysphagia to solids then liquids is often preceded by **GERD** (**adenocarcinoma** of the **lower third** of the esophagus) or by **smoking** (**sqaumous cell carcinoma** of the **upper third** of the esophagus). Do a **barium swallow** to identify the location of lesions and identify safety of the EGD (to avoid perforation). Confirm with an **EGD with Bx** and assess stage with a **CT Scan**. Treatment is **resection**.

Path: GERD = Adeno, Smoking/Drinking = SCC
Pt: Progressive Dysphagia to food then liquids and wt loss
Dx: Barium Swallow (avoid Perforation)
EGD + Bx (definitive)
CT scan (staging)
Tx: Resection

Mallory-Weiss Tear

A **mucosal** (superficial) tear of the esophagus that occurs after **forceful vomiting**, usually at the GE junction. It will present as **bright red emesis** which resolves spontaneously. Nothing need be done for it. Treat a GI bleed if the person is still bleeding. Reassurance if the bleeding is stopped or the EGD reveals this.

Path: Submucosal Tear, Minor Bleeding
Pt: Forceful vomiting → Hematemesis → Resolution
Dx: None needed, though EGD would confirm
Tx: Spontaneously Resolves

Boerhaave

An **esophageal perforation** caused by prolonged **retching**. The patient will be sick. There will be **fever**, **leukocytosis**, **Hamman's Crunch** (air in the mediastinum heard with each heartbeat). Do a **gastrografin** swallow first (water soluble to prevent mediastinal irritation). If negative, follow with a **barium** swallow**.** Conclusive diagnosis (and hopeful therapy) can be made with **EGD**. Surgical repair is definitive.

Path: Full thickness mucosal tear, mediastinitis
Pt: SICK. Fever, Leukocytosis, Hamman's Crunch
Dx: Gastrografin Swallow → Barium Swallow → EGD
Tx: Surgical Repair

Perforation

Esophageal perforation is a full thickness tear through all layers of the esophagus. It can occur from something as simply as a chicken bone, though **iatrogenic** is by far the most common cause. Treat it like a **Boerhaave**.